AcuTab-M

Quick Guide

Acura Embedded Systems Inc.

Main Features

Platform: Intel® Cedar Trail Platform (N2600+NM10)
GPU: Intel ATOM N2600 1.6GHz Dual core
Chipset: Intel® NM10 Express Chipset
System Memory: 2GB DDRIII 800 SO-DIMMM
Storage: 1 x 32G SATA Slim Half-Size Solid State Disk
LCD Panel: 10.4-inch LED Backlight Screen
10.4“ XGA (1024x768) 340nits LCD + T/P(Polarizer + 1/4 λ+ AR)
Touch Panel
5-wire Resistive Touch Screen
Audio: -1 x High Quality Speaker (2W)
-Internal Microphone : 1 x in front Bezel
TPM:
1 x Compatible with TPM1.2 (option)
Communication :
- 10/100Mbps Ethernet (via adapter to mini USB port)
- Wi-Fi IEEE 802.11 a/b/g/n; Bluetooth 4.0
- 3G,4G LTE(Optional)
- Webcam:
Front - 2 Mega-pixel Camera
Rear - 5 Mega-pixel Camera with LED Flash light
- Automatic Focus
- Automatic white balance Power
Adapter :
AC Input, 100V ~ 240VAC, 50~60Hz
DC Output, 19VDC@3.42A, 65W
Battery
Internal Battery - Smart Lithium Polymer Battery, 3800mAH, 7.4V

Mechanical & Environmental

	Dimension	**277.8 x 206 x 26.5mm**
	Weight	**1.1kg**
Operation System	OS	**Windows 7 Pro, WES7P 32bit**
Rugged Design	Drop	**6ft drop ploywood on concrete**
	Water/Dust Resistance	**IP65**
Environment	Operation temperature	**-20°C to +50°C**
	Storage Temperature	**-30°C to +70°C**
	Humidity	**5-95% without condensation**

Viewing AcuTab-M

Before starting to set up the AcuTab-M, get familiar with the locations and purposes of controls, connectors and ports, which are illustrated in the figures below. When placed upright on the desktop, the front panel of AcuTab-M appears as shown in below.

F1 Button	F1=explorer
F2 Button	F2=Windows Media Player
F3 Button	F3=OnScreen keyboard (osk)
F4 Button	F4=Task Manager
F5 Button	F5=Calculator
Fn Button	Fn = Hotkey Utility
Fn+F3 Button (SAS)	Implement Secure Attention Sequence (SAS) Similar function as pressing **Ctrl-Alt-Delete** on a standard keyboard
Function Key mapping during boot (for Windows system recovery)	F1 KEY -LEFT ARROW F2 KEY -UP ARROW F3 KEY -ENTER F4 KEY -RIGHT ARROW F5 KEY -DOWN ARROW

Camera / 2 Mega-pixel (Front-facing)

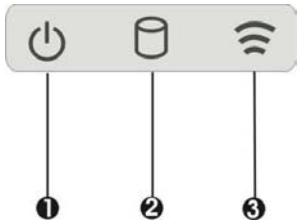
The built-in camera can be used as a communication device for allowing you to capture images, record videos, and have video chats. It is 2M pixels and transmitting instant image through network for conference.

Camera / 5 Mega-pixel (Rear-facing)

The built-in high resolution camera can be used as a communication device for allowing you to capture images, record videos, and have video chats.

Power / Storage / RF wireless

Keeps you informed of your system's current power status, storage access status, and RF wireless devices ON/OFF status.



1. Power LED Indicator
2. Storage Access
3. RF ON/OFF

Power LED Indicator

Letting you know that system is turned on and indicate the battery charging status.

- Lights green when the system is powered on and battery is discharging
- Lights amber when the system is powered on and battery is charging
- Lights blinking amber when the system is in S3 sleep mode and battery is charging or lights blinking green when the system is in S3 sleep mode and battery is fully charged
- Lights off when system is powered off or the battery is fully charged.

Storage Access

When LED blinking white indicates that the system is accessing the internal storage drive.

RF ON/OFF Indicator

When LED turns on, white LED indicates that a wireless device(Wifi/Bluetooth/3G/LTE) is activated. When LED turns off, it indicates that all RF devices are being disabled.

Programmable Function Buttons (F1~F5)

These buttons is programmable to execute specific software application. When you program the application to launch, please write this directory as listed below into the configuration file, then the system will aware and execute this application.

[Setup]

F1_EXE="c:\windows\explorer.exe"
F1_PARA=""
F1_PATH=""
F2_EXE="C:\Program Files\Windows Media Player\wmplayer.exe"
F2_PARA="/prefetch: 1"
F2_PATH=""

F3_EXE="C:\WINDOWS\system32\osk.exe"
F3_PARA=""
F3_PATH=""

F4_EXE="C:\WINDOWS\system32\taskmgr.exe"
F4_PARA=""
F4_PATH=""

F5_EXE="C:\WINDOWS\system32\mspaint.exe"
F5_PARA=""
F5_PATH=""

The configuration file is located under drive C: root directory as "c:\FKeySet.txt"

Barcode Buttons (F1 / F4)

Please press F1 or F4 function keys to trigger to scan the barcode when the optional barcode scanner snap-on module is installed.

If your system does not have this module, these buttons can be programmable to execute specific software application. When you program your application, please write this directory as listed below into your configuration file, then the system will aware and execute this application.

F1_EXE="c:\windows\explorer.exe"
F1_PARA=""
F1_PATH=""

F4_EXE="C:\WINDOWS\system32\taskmgr.exe"
F4_PARA=""
F4_PATH=""

Accessory Door

By removing the four screws on top side of the system, allows you to install optional snap-on module.

External Battery Connector

To install the External Battery, please remove the cover of external battery connector before snap the battery pack into the external battery connector.

Speaker

Integrated stereo speaker for sound and audio output for your multimedia presentations or listening pleasure.

Protective Rubber

To prevent system harm from vibration or shock, the system is designed with installing protective rubber on both sides.

3.5mm Headphone Jack

Allows you to connect an external stereo headphone with MIC for personal listening and sound recording.

USB Ports

The two USB type-A ports allows you to connect USB 2.0-compliant devices (for example, mouse, keyboard and so on) to your Tablet PC.

Ethernet port

The 10/100Mbps Ethernet port allows you to connect to other computers/networks through a local area network (LAN) via a mini-USB to RJ45 adapter cable provided in the accessory box.

Power Button

Switch the computer power on and off, or resumes whenever it is in Suspend mode (by OS define).

Lock Button

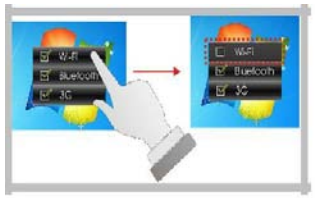
To prevent the screen or function keys have been touched accidentally. The screen will appear **Lock** message.

To make the system back to work, press the Lock button again to disable the lock function, the screen will appear **Unlock** message.

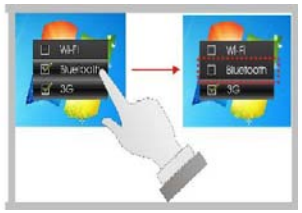
RF Button

Press this button to enable or disable power of the Wi-Fi, Bluetooth or 3G devices.

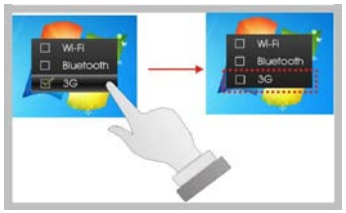
When you press the RF Button, the screen pops-up the option list for your selection.
You can see all functions in this option list have been ticked. To close any function, please touch the option to close the execution as shown in the following graphics.



Disable Wi-Fi function

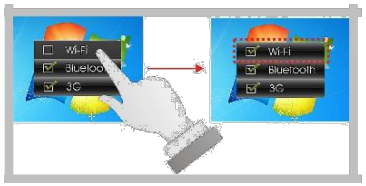


Disable Bluetooth function

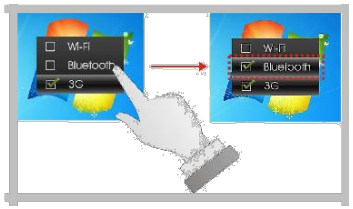


Disable 3G function

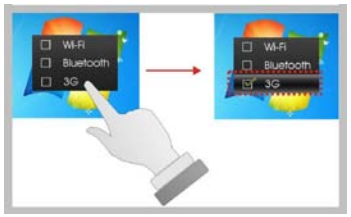
To activate the function, please again tick the option as shown in the following graphics to make the device enable.



Activate Wi-Fi function



Activate Bluetooth function



Activate 3G function

DC-Jack

Lets you connect the AC power adapter in supplying continuous power to AcuTab-M and recharging the battery.

The AC adapter provides external power source to your system and charges the internal battery pack at the same time. The AC adapter also has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets.

To connect the power adapter:

1. Plug the AC adapter connector to the DC-Jack socket on the left side of the system.
2. Plug the power cord to the AC adapter.
   Plug the other end of the power cord to a live wall outlet, at the same time, the Power LED at front panel lights up.

- **For the power supply of this equipment, an approved power cord has to be used.**
- **Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.**
- **Remove all power from the device prior to installing or removing any accessories, hardware, or cables**
- **Before cleaning the system, make sure it is disconnected from any external power supplies (i.e. AC adapter).**

Using the Hotkey Utility Application

AcuTab-M has numbers of applications on the control panel for executing specific command. It provides you to adjust brightness, volume, launch webcam, and switch monitor.

This user interface provides specific mobile utility to let you easily setup some helpful functions and aware the system status directly.

This utility also let you adjust some function to fit the requirements, such as brightness and volume adjustment, webcam launch, screen orientation and monitor switching.

Furthermore, it also provides system information for your reference, such as battery status, RF setting with its signal strength, firmware (BIOS & EC) version information. Besides these features, you can press the soft button to hibernate this system.

About the User Interface

Enable or disable the User Interface

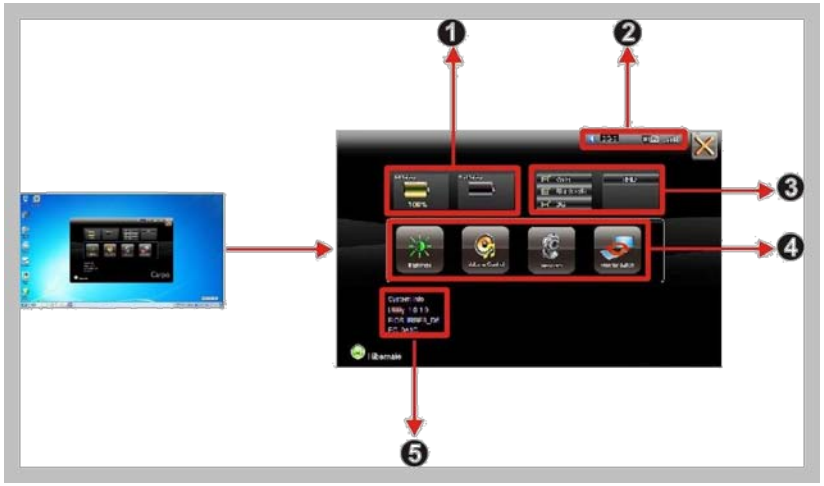
To display the User Interface, please press the Fn button or point the Hotkey Utility icon located on Windows desktop.

To close the User Interface function, please press the button on the top right corner on this User Interface for disabling this utility from the screen.

If there is no action within this utility in 5 seconds, the UI screen will close automatically.

System Status Information

This utility shows you the battery capacity status, RF status with its signal strength and system information, and provides the control panel for the function setting.



For battery capacity status:

AcuTab-M is equipped with one internal battery and one optional external battery.

The battery capacity status shown below advises you, that only one internal battery is embedded with the system with fully charged, and there is no 2nd optional battery installed in the system.

If the system installs both the 1st internal battery and 2nd optional battery, the illustration shown below indicates its current charging status and capacity.

If 1st battery capacity drops to 15%, the system will display the following warning message for 5 seconds.

For RF status:

The following RF status shows you that the system is equipped with Wi-Fi, and Bluetooth functions. If you want to close either of these functions, please refer section for how to disable it.

The following signal strength shows you that the Wi-Fi function is connecting currently, the stronger the signal strength, the more scale will show on the bar. If there is no module in the system, there will be no status scale in the following status bar.

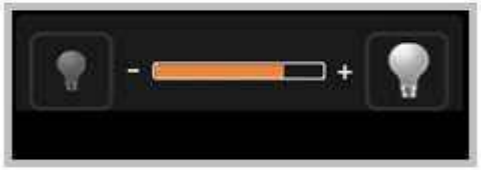
For System Information:

The system information shown on the left shows you the utility version, BIOS and EC version and you can use them for customer service when asked.

Brightness Control

For brightness adjustment, press the **Brightness** icon.

When you press it, the brightness control panel is appeared as follows:



You can click or to reduce or increase the LCD brightness. Also, you can slide the scale bar to set the brightness.

Volume Control

For Volume adjustment, press the **Volume** icon.

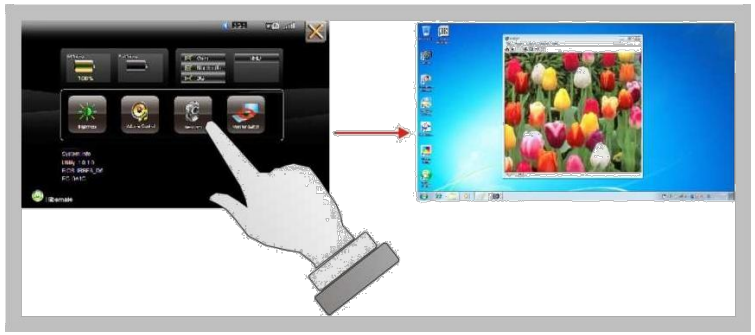
When you press it, the Volume control panel is appeared as follows:

You can click or to reduce or increase the audio volume incrementally.

Also, you can slide the scale bar to set the audio volume. You can tick the **Mute** to mute the audio.

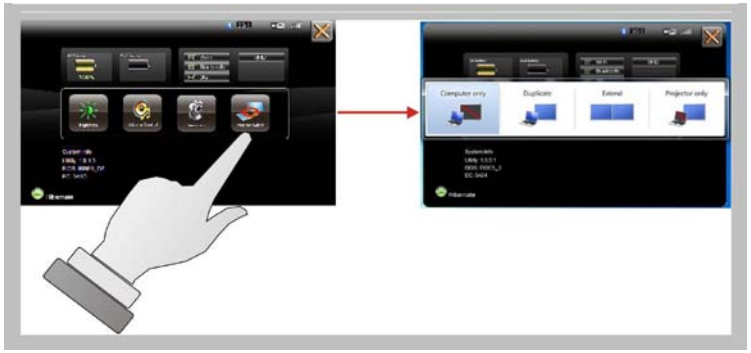
Launch Webcam Utility

For Webcam Launch, press the **Webcam** icon to launch the Webcam utility. Or can access the **Webcam** icon located on desktop.

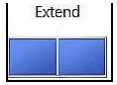


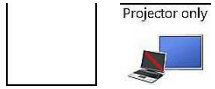
Monitor Switch

For Monitor switch, press the Monitor Switch to pop-up the selection bar for choosing the display mode within following four options.



You can click **Duplicate** to display the same contents both on the default screen and external display device. The resolution on these two display modes are same, it is not available to adjust the resolution on the external display mode.

You can click **Extend**  to display the different contents on the default screen and external display device. You only can adjust the resolution on the external display device.

You can click **Projector only**  to display on external projector only.

Powering on for the first time

The Power/Resume button is found on the left side of the AcuTab-M. Press the Power/Resume button to start your system and check that if the Power LED turns on.

After a few seconds, the system's display will turn on and your system will begin to execute the Power On Self Test or POST to check if all system components are running properly. Any error found during the test will be displayed on the screen.

After the test, the screen will also display a message "**press <F2> to enter SETUP**". You don't need to run this program at the moment as your dealer already made the necessary settings for your computer optimal operation.

After the test has completed, your computer will start to search and boot up the operating system from your hard drive.

Before setting up the system, please make sure the following items are available.

- Keyboard
- Mouse (for system software installation)

A keyboard is an input device; a mouse is a pointing device. Please connect these two devices as graphics shown below to interact with your system.

Using a SIM Card

AcuTab-M can be equipped with a 3.5G module (optional) that can work with SIM card. (SIM card is always working with 3.5G module.)

Inserting a SIM Card

To insert a SIM card into the SIM Card slot:

1. Turn off your System.

The AcuTab-M must be powered off while the SIM Card is being connected. Otherwise, it is harmful to both devices and it shortens the life of these devices.

2. Unscrew the accessory cover on top of the Tablet PC.
3. Make sure the clipped corner facing inward with the gold fingers of the SIM card facing down. Push the SIM Card firmly but slowly into the SIM Card slot.

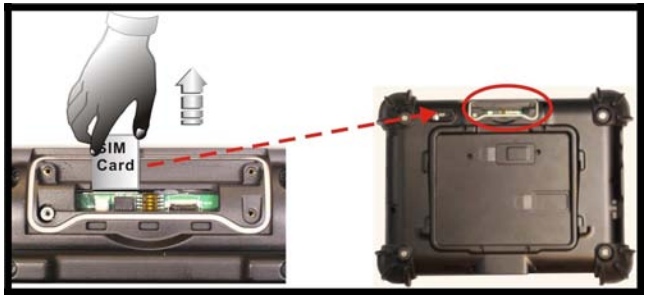
To insert a SIM card into the slot, please pay attention only one correct side can be accepted for the card slot. If you cannot insert the card into the slot or you had inserted the card but it is not recognized by the AcuTab-M, please remove the card and insert it again. To prevent the damage made both on card and the slot, never forced an entry into the slot with incorrect side.

4. When the full length of the card is almost inside the slot, the SIM Card will be automatically detected.
5. Place the accessory cover back and screw it firmly.

Removing a SIM Card

To remove a SIM Card from the SIM Card slot:

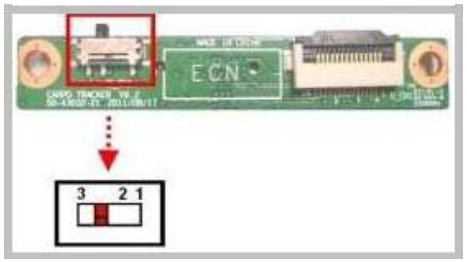
1. Turn off your system.
2. Slightly push the SIM card to pop it out and pull it out directly. When the SIM card has moved out a space out of the slot, hold the edges of the card and slowly slide it out.



Using a GPS Module (optional)

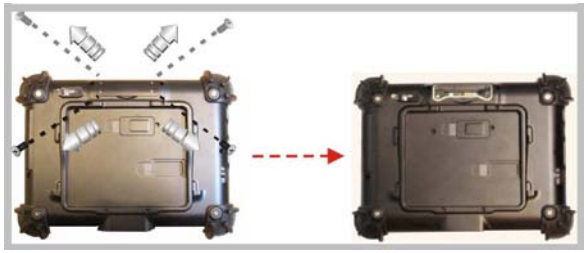
AcuTab-M is designed with equipped the optional GPS module.

Before installing the GPS module, please adjust to DIP 2-3 for GPS mode as indicated in the following diagram.



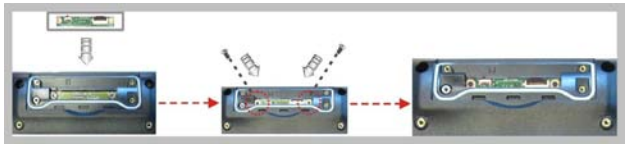
To install the GPS Module:

1. Make sure the system is turned off, internal battery detect DIP switch set to off and unplug AC adapter.
2. Unscrew four screws from the accessory door on top of the system.



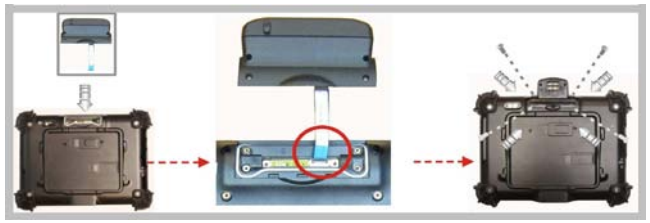
3. Mount and secure the GPS Tracker daughter board into the mainboard with screws.

GPS Tracker daughter Board



4. Insert FFC cable of GPS module into connector slot. Screw to secure the GPS module onto the tablet.

GPS Module



5. Under Windows, press the RF Button, and enable GPS module from the pops-up screen's option list.

Bios Setup Program

This system comes with a chip from Phoenix BIOS that contains the ROM Setup information for your system. (This chip serves as an interface between the processor and the rest of the system components.) This section explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

The Setup utility program allows updates to the main board configuration settings. The BIOS setup values will be saved in the CMOS. It is executed when you change the system configuration, you change the system backup battery, or the system detects a configuration error and asks you to run the Setup program. You must have connected a USB type of keyboard, and Use the arrow keys to select, and press Enter to run the selected program.

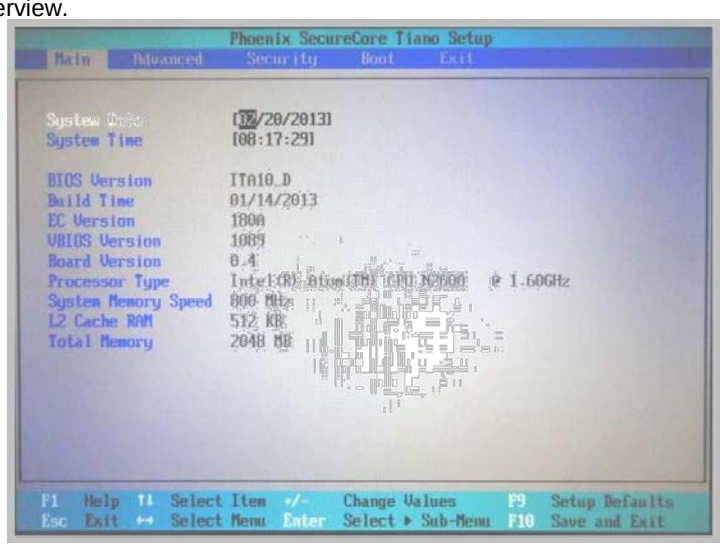
Function Key

Please check the following table for the function description of each direction key.

Function Key (s)	Function Description
	Moves cursor left to select Screens
/	Moves cursor up or down to select items
+ / -	To change option for the selected items
<Tab>	To bring up the selected screen
<F1>	To display the General Help screen
<F10>	To save changes and exit the BIOS SETUP UTILITY
<ESC>	To jump to the Exit Screen or exit the current screen

Main Screen Setup Utility

When you enter the BIOS SETUP UTILITY, the Main screen will appear and display the system overview.



The Standard CMOS Setup screen is displayed above. Each feature may have one or more option settings. Use the arrow keys to highlight the feature you want to change and then use "▼" or "▲" to select the value you want for that feature.

NOTE: The system BIOS automatically detects Phoenix, Processor, memory size, thus no changes are necessary.

System Date

To set the date, highlight the Date field and then press +/- keys to set the current date. Follow the month, day and year format.

System Time

To set the time, highlight the Time field and then press +/- keys to set the current time. Follow the hour, minute, and second format.

BIOS Version

The system will automatically displays the information of BIOS version.

EC Version

The system will automatically displays the information of EC (Embedded Controller) firmware version.

Build Time

The system will automatically displays the build time of BIOS.

Processor Type

The system will automatically displays the information of Processor Type and speed.

System Memory Speed

The system will automatically displays the information of System Memory Speed.

L2 Cache RAM

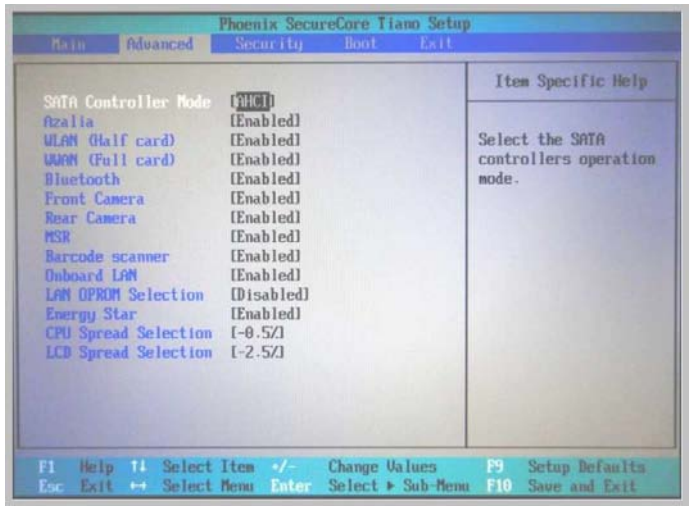
The system will automatically displays the information of L2 Cache RAM.

Total Memory

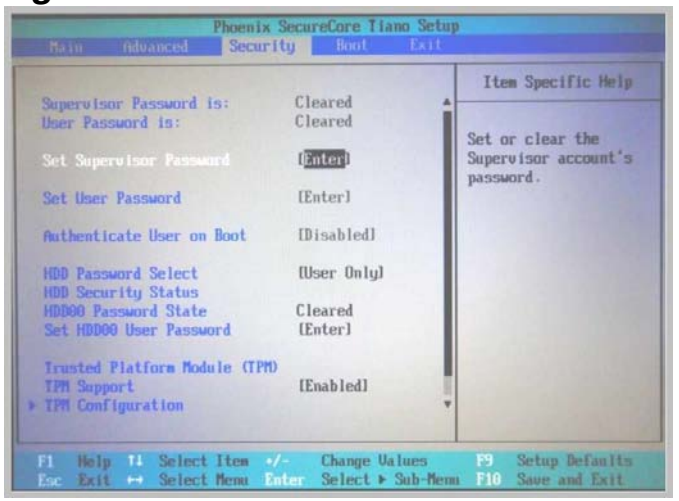
The system will automatically displays the information of Total Memory.

Advanced BIOS Features

For Advanced Settings, it lets you define the device configuration when system booting.


Phoenix SecureCore Tiano Setup
Main Advanced Security Boot Exit
SATA Controller Mode [AHCI]
Azalia [Enabled]
WLAN (Half card) [Enabled]
WWAN (Full card) [Enabled]
Bluetooth [Enabled]
Front Camera [Enabled]
Rear Camera [Enabled]
MSR [Enabled]
Barcode scanner [Enabled]
Onboard LAN [Enabled]
LAN OPROM Selection [Disabled]
Energy Star [Enabled]
CPU Spread Selection [-0.5%]
LCD Spread Selection [-2.5%]
Item Specific Help
Select the SATA controllers operation mode.
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

Security Configuration


Phoenix SecureCore Tiano Setup
Main Advanced Security Boot Exit
Supervisor Password is: Cleared
User Password is: Cleared
Set Supervisor Password [Enter]
Set User Password [Enter]
Authenticate User on Boot [Disabled]
HDD Password Select [User Only]
HDD Security Status
HDD00 Password State Cleared
Set HDD00 User Password [Enter]
Trusted Platform Module (TPM)
TPM Support [Enabled]
▸ TPM Configuration
Item Specific Help
Set or clear the Supervisor account's password.
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

Set Supervisor Password

This field let you set or clear the Supervisor account's password.

Set User Password

This field let you set or clear the User account's password.

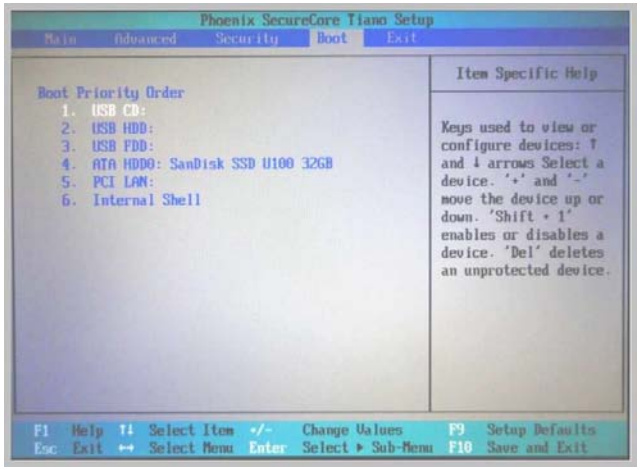
TPM Support

Lets you activate or de-activate the TPM function by selecting Enabled or Disabled option. (For the non-TPM SKU, this item will display "no detected".)

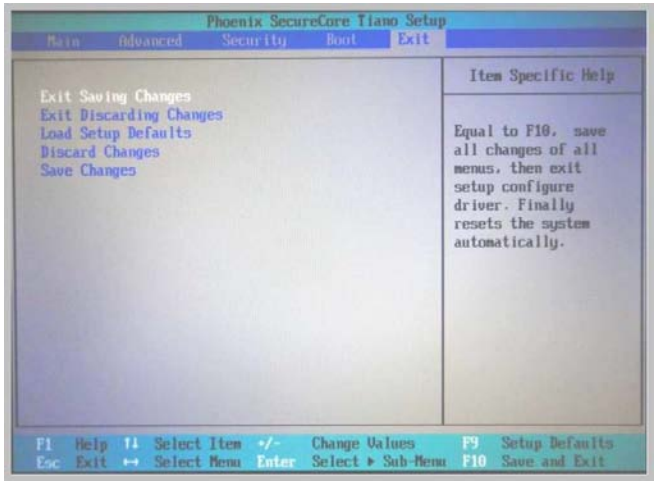
Boot Management Setup

This page allows you to set the search drive sequence where the system will try to boot up first.

To select the boot device, you can use the up or down arrow key, then press <**+**> to move up the device in the list or press <**-**> to move down the device in the list. To exit from this menu, press <**Esc**>.


Phoenix SecureCore Tiano Setup
Main Advanced Security Boot Exit
Boot Priority Order
1. USB CD:
2. USB HDD:
3. USB FDD:
4. ATA HDD0: SanDisk SSD U100 32GB
5. PCI LAN:
6. Internal Shell
Item Specific Help
Keys used to view or configure devices: ↑ and ↓ arrows Select a device. '+' and '-' move the device up or down. 'Shift + 1' enables or disables a device. 'Del' deletes an unprotected device.
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

Exit Control


Phoenix SecureCore Tiano Setup
Main Advanced Security Boot Exit
Item Specific Help
Exit Saving Changes
Exit Discarding Changes
Load Setup Defaults
Discard Changes
Save Changes
Equal to F10, save all changes of all menus, then exit setup configure driver. Finally resets the system automatically.
F1 Help ↑↓ Select Item +/- Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸ Sub-Menu F10 Save and Exit

Exit Saving Changes

When you select this option, it will pop-out the following message, “Save configuration changes and exit setup?” Select [OK] to save the changes and exit the BIOS SETUP UTILITY.

Exit Discarding Changes

When you select this option, it will pop-out the following message, “Discard changes and exit setup?”. Select [OK] to exit the BIOS SETUP UTILITY without saving any changes.

Load Setup Defaults

When you select this option, it will pop-out the following message, “Load optimal defaults?” Select [OK] to load the default values for all the setup configurations.

Save Changes

When you select this option, it will pop-out the following message, “Save changes?” Select [OK] to save all changes.

With the unique set of products, Acura Embedded Systems remains committed to its goal of providing trouble-free and customer-friendly service. A special customer service unit has been set up specifically to cater to our esteemed customers' needs.

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